

1 29813

Page 1

N900040100

Setup Start *NS1*

Stop ***NS2***

Start Date: 2/19/15 **Start Qty:** 6.00 ***6***

Required Date: 2/23/15 **Req'd Qty:** 6.00 ***6***

Reference:

Approvals: **Process Plan:** MLS **Date:** 15-02-25 **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Draw Nbr	Revision Nbr	
D3901	E	

0.00

100

Memo

0.00

Cut blanks at 55.1875"

0.00

110

Memo

0.00

1-Mill as per folio FB090 & dwg D3901.

FOLIO REV: 44

DWG REV: E

2-Deburr as required

DAS

20.

9-89

5-03-17

DAS

20

9-89 1

5-03-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

1 29813

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

6

6

Reference:

Run Start *NR1*

Stop ***NR2***

120	QC2- Inspect parts off machine FAI/FAIB	0.00	
120			DAS
QC	Memo	0.00	6 20 15-03-17 9-89
Quality Control	***EXTRA MATERIAL WILL BE CUT ON ASSEMBLY***		

130	QC8- Inspect parts - second check	0.00			
130					
QC	Memo	0.00	6	6	JTC 2015-03-18
Quality Control	***EXTRA MATERIAL WILL BE CUT ON ASSEMBLY***				

140	Identify as per dwg & Stock Location: <u>W/ps1</u>	0.00	
140			
Packaging	Memo	0.00	<u>6</u> <u>Q</u> <u>15-3-19</u>
Packaging			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Handling/Pre									
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Process									
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Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 129813

February-23-15 10:24:25 AM

129813

Page 3

Item ID: D3901-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bar
Start Date: 2/19/15 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 2/23/15 Req'd Qty: 6.00 ***6*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

MLJ 15-03-20

MF
15-3-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

February-23-15 10:24:24 AM

129813

D3901-1

Required Qty: 6.00

IPP RevB:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304B0.250x0.500		Purchased	No			100	f	87.9160	4.513	28.50316			
										**	30.333'	DAS 20 9-89	15-03-17
304 BAR .250 x .500													
<u>Location</u>						<u>Loc Qty</u>		<u>Loc Code</u>					
MAT009						87.916							
m129366						32.316							
m131205						55.6							
										30.333'			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Doc/Data									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DART AEROSPACE LTD		Work Order: 129813
Description: Bar		Part Number: D3901-1
Inspection Dwg: D3901	Rev: E	Page 1 of 1

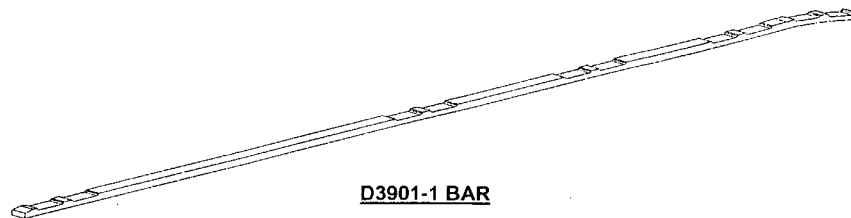
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.25 Ref	+/-0.030	.250	✓		SLO8	Vern
4.00	+/-0.030	4.000	✓		"	
24.00	+/-0.030	24.000	✓		SLO1	Tape
35.00	+/-0.030	35.000	✓		"	
44.51	+/-0.030	44.500	✓		"	
50.04	+/-0.100	50.040	✓		"	
0.18	+/-0.030	.179	✓		SLO8	
0.50 Ref	+/-0.030	.500	✓		↓	
0.75	+/-0.030	.750	✓			
0.50	+/-0.030	.500	✓			
1.75	+/-0.030	1.750	✓			
0.50	+/-0.030	.500	✓			

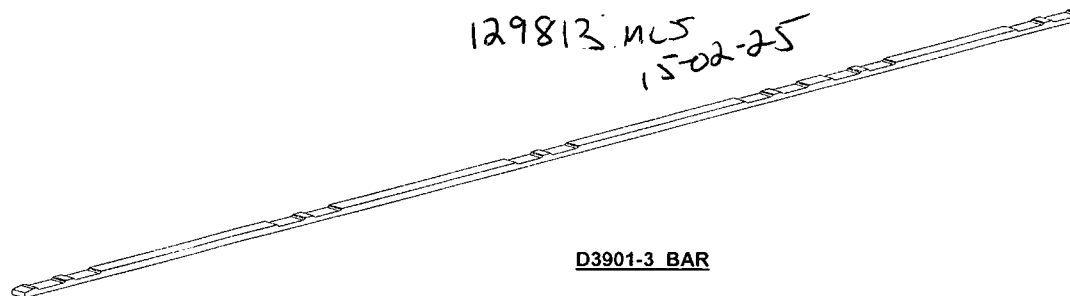
DAS

Measured by: 20 9-89	Audited by: JTC	Preliminary Approval:
Date: 13-03-17	Date: 2015-03-18	Date:

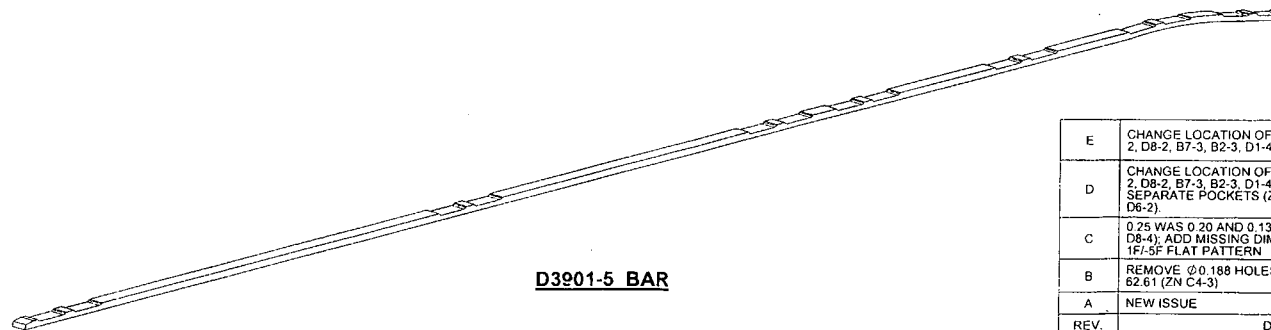
Rev	Date	Change	Revised by	Approved
A	09.09.15	New Issue	KJ	
B	12.07.31	Dimensions updated per Dwg Rev C	KJ	
C	12.09.26	Dimensions updated per Dwg Rev E	KJ	



D3901-1 BAR



D3901-3 BAR

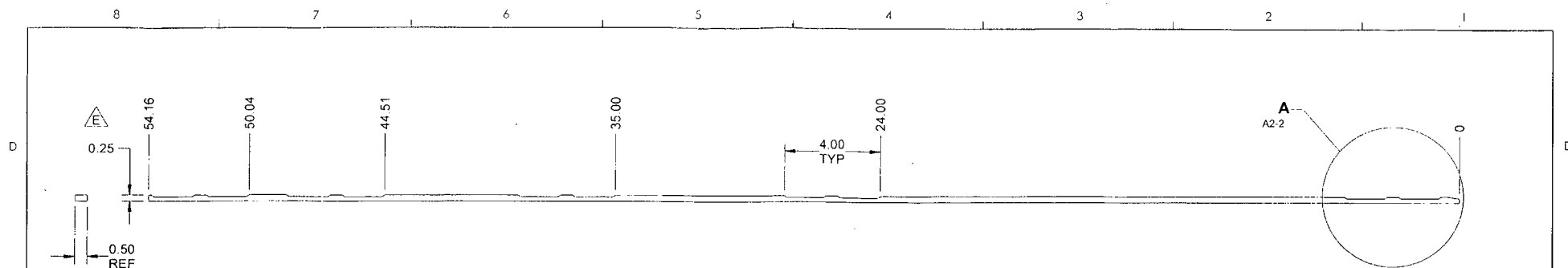


D3901-5 BAR

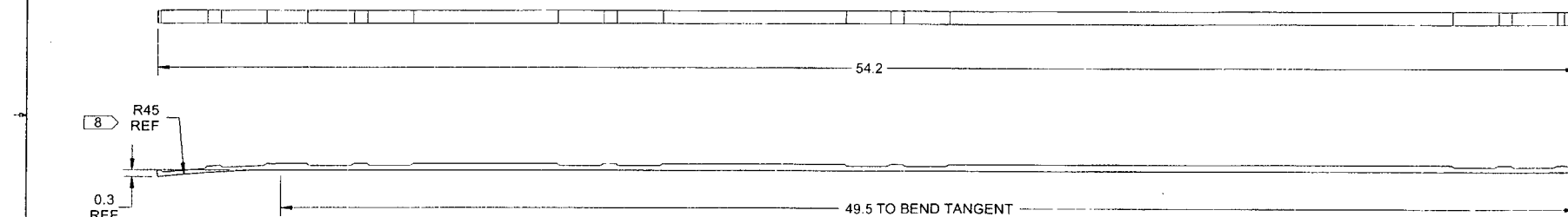
129813 NLS
1502-25

RELEASED
2012-09-04
WP

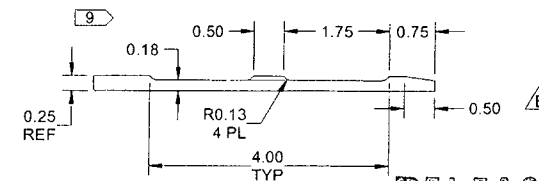
E	CHANGE LOCATION OF END POCKETS ON -1/-3/-5 (ZN B1-2, D8-2, B7-3, B2-3, D1-4, D7-4).	DC	12.08.23
D	CHANGE LOCATION OF END POCKETS ON -1/-3/-5 (ZN D1-2, D8-2, B7-3, B2-3, D1-4, D8-4). SPLIT POCKETS INTO TWO SEPARATE POCKETS (ZN A2-2). ADD POCKET TO -1 (ZN D6-2).	DC	12.08.21
C	0.25 WAS 0.20 AND 0.130 WAS 0.080 (ZN B2-2, B1-2, B1-3, D8-4); ADD MISSING DIMENSIONS (ZN C5-3); ADD D3901-1F/5F FLAT PATTERN	RF	12.01.24
B	REMOVE Ø0.188 HOLES FROM D3901-1/-3/-5; 62.12 WAS 62.61 (ZN C4-3)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC. KENT, WA DRAWING NO. D3901 TITLE BAR SCALE NTS SHEET 1 OF 4 REV. E DATE 12.08.23 COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DRAWN	DC		
CHECKED	DC		
MFG. APPR.	DC		
APPROVED	DC		
DE APPR.	DC		
DATE	12.08.23		



D3901-1F BAR FLAT PATTERN



**D3901-1 BAR
(MAKE FROM D3901-1F)**

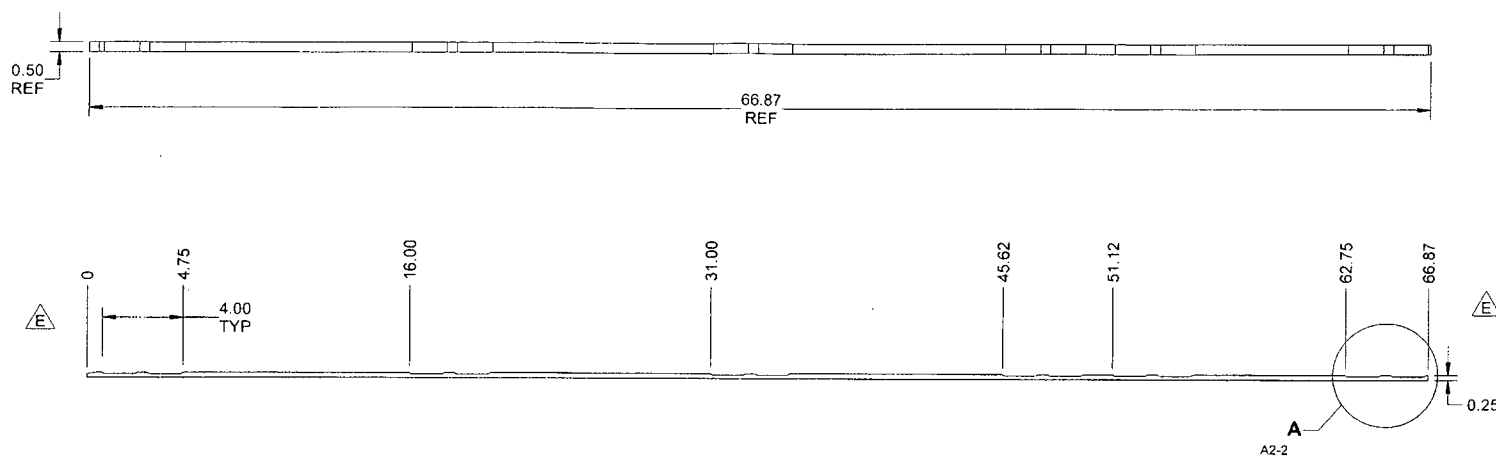


DETAIL A
D1-2
B2-3
D1-4

RELEASED
2012-09-01

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 1.78 lbs
 - 8) FORM TO FIT WEARPLATE
 - 9) ANGLE TO BE DETERMINED BY AVAILABLE TOOLING

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	PC	KENT, WA	
CHECKED	SE	DRAWING NO.	REV. E
MFG. APPR.	SE	D3901	SHEET 2 OF 4
APPROVED	SE	TITLE	SCALE
DE APPR.	SE	BAR	NTS
DATE	12.08.23	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



D3901-3 BAR

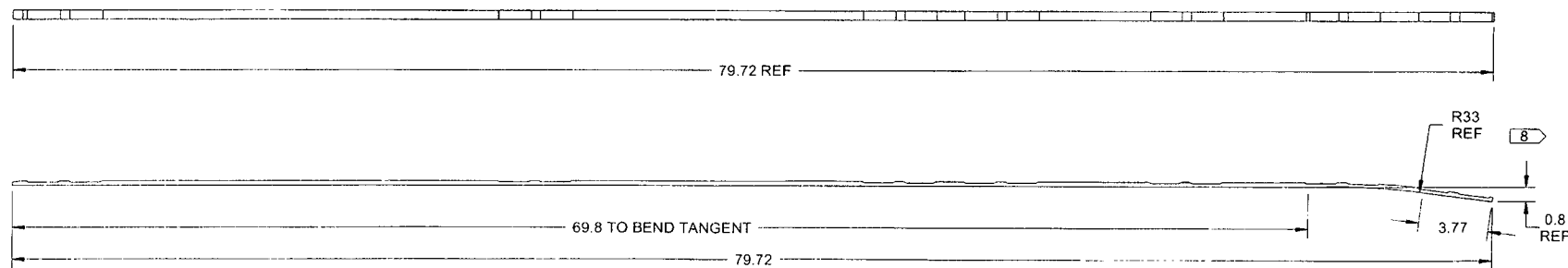
NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.21 lbs

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	DC	KENT, WA	
CHECKED	SE	DRAWING NO.	REV. E
MFG. APPR.	SE	D3901	SHEET 3 OF 4
APPROVED	SE	TITLE	SCALE
DE APPR.	SE	BAR	NTS
DATE	12.08.23	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. NO DISSEMINATION OR REPRODUCTION IS PERMITTED WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2012-09-04
MP

D3901-5F BAR FLAT PATTERN



D3901-5 BAR
(MAKE FROM D3901-5F)

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL BAR, 0.250 THICK X 0.500 WIDTH
PER ASTM A276 OR ASTM A240
REF. DART SPEC. M304B0.250X0.500
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.63 lbs
- 8) FORM TO FIT WEARPLATE

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	PC	KENT, WA	
CHECKED	BS	DRAWING NO.	REV. E
MFG. APPR.	8/1	D3901	SHEET 4 OF 4
APPROVED	1/2	TITLE	SCALE
DE APPR.	SH	BAR	NTS
DATE	12.08.23	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	
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2012-09-04
MT